

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number  
WO 2004/040577 A1

(51) International Patent Classification<sup>7</sup>: G11B 27/32,  
20/12

(21) International Application Number:  
PCT/JP2003/013797

(22) International Filing Date: 28 October 2003 (28.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2002-315678 30 October 2002 (30.10.2002) JP

(71) Applicant (for all designated States except US): MAT-  
SUSHITA ELECTRIC INDUSTRIAL CO., LTD.  
[JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka  
571-8501 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MITA, Hideaki  
[JP/JP]; 5-1-523-108, Koyochonaka, Higashinada-ku,

Kobe-shi, Hyogo 658-0032 (JP). GOTOH, Yoshiho  
[JP/JP]; 5-1-3, Higashinakahama, Joto-ku, Osaka-shi,  
Osaka 530-0023 (JP). FUKUSHIMA, Yoshihisa [JP/JP];  
1-6-4-2403, Tomobuchicho, Miyakojima-ku, Osaka-shi,  
Osaka 534-0016 (JP). BANNAL, Tatsushi [JP/JP]; 389-12,  
Kitanoda, Sakai-shi, Osaka 599-8128 (JP).

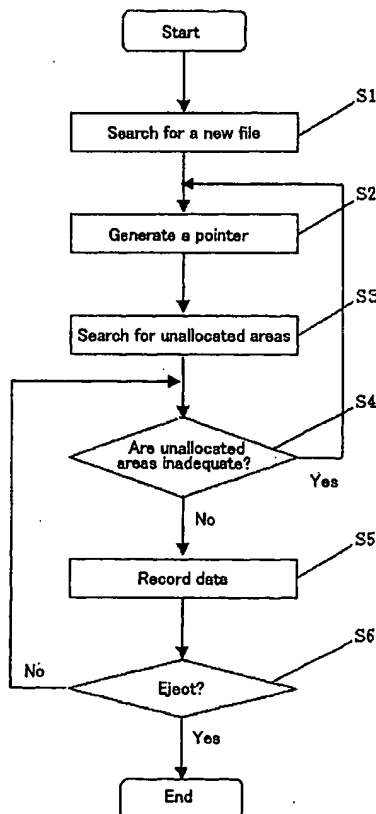
(74) Agents: YAMAMOTO, Shusaku et al.; Fifteenth Floor,  
Crystal Tower, 2-27, Shiromi 1-chome, Chuo-ku, Osaka-  
shi, Osaka 540-6015 (JP).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,  
RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,  
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: RECORDING METHOD AND RECORDING APPARATUS



(57) Abstract: A recording method is provided for recording data into an information recording medium, in which the number of data rewrites into the same area is limited. The recording method comprises the steps of (a) performing a search for unallocated areas in an information recording area and retaining, in a memory, unallocated area identifying information for identifying at least one unallocated area found by the search, (b) determining whether or not an unallocated area satisfying a record request is present among the at least one unallocated areas identified by the unallocated area identifying information, and (c) when an unallocated area satisfying a record request is present among the at least one unallocated areas identified by the unallocated area identifying information, allocating the unallocated area as an area for recording data and recording data into the allocated area.

WO 2004/040577 A1